(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 27 January 2005 (27.01.2005)

PCT

(10) International Publication Number WO 2005/009074 A1

(51) International Patent Classification7:

H04R 7/04

(21) International Application Number:

PCT/IB2004/051163

(22) International Filing Date:

8 July 2004 (08.07.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 03102184.3

16 July 2003 (16.07.2003)

- (71) Applicant (for all designated States except US): KONIN-KLUKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): AARTS, Ronaldus, M. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). VAN DELDEN, Martinus, H., W., M. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). JOHNSON, Mark, T. [GB/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (74) Agent: ELEVELD, Koop, J.; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

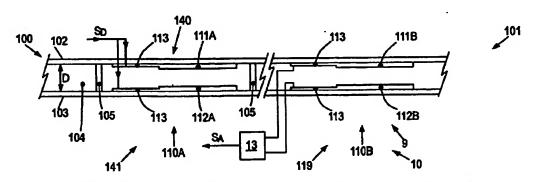
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AB, AG, AL, AM. AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CII, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EH, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PII, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KB, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA. CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA. MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM. PG, PH, PL, PT, RO. RU, SC, SD, SE, SG, SK, SL, SY, TJ. TM. TN. TR. TT. TZ. UA, UG, UZ, VC, VN, YU. ZA. ZM.

[Continued on next page]

(54) Title: PANEL-SHAPED ACOUSTIC WAVE GENERATOR



(57) Abstract: A panel-shaped acoustic wave generator (1A; 1B; 101) comprises one or more planar plates (2,3;102,103). In an embodiment two planar plates (2, 3; 102, 103) are arranged substantially parallel at a distance (D) from each other, while the wave generator (1A;1B;101) further includes an acoustic transducer unit (4; 110A) for causing at least one of the plates to vibrate and a motional feedback unit (10; 110B). The motional feedback unit (10; 110B) comprise an integrated motion sensor (9) which comprises a first sensor component (11; 111B) mechanically coupled to a first plate (2; 102) and a second sensor component (12; 112B) mechanically coupled to a second plate (3; 103). In a specific embodiment, the wave generator is implemented as a display device (100) wherein the feedback means comprise at least one display cell (110B) of the display device.